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A New Species of the Genus *Micreremus* (Acarina,
Oribatida) from Japan

With 12 Text-figures

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ABSTRACT A description of *Micreremus subglaber* sp. nov. is given. The new species differs from its known congeners in the notogastral sculpture consisting of shallow and indistinct depressions.

An ecological investigation on arboreal oribatid fauna was carried out by the author in the Shiga Heights, Central Japan. Among several species collected there, a new species of the genus *Micreremus* to be described below was found. This is the first taxonomic study of the genus in Japan. The morphology of the new species was studied not only by optical microscope (OM) but also by scanning electron microscope (SEM, Hitachi S-310).

Micreremus subglaber sp. nov.

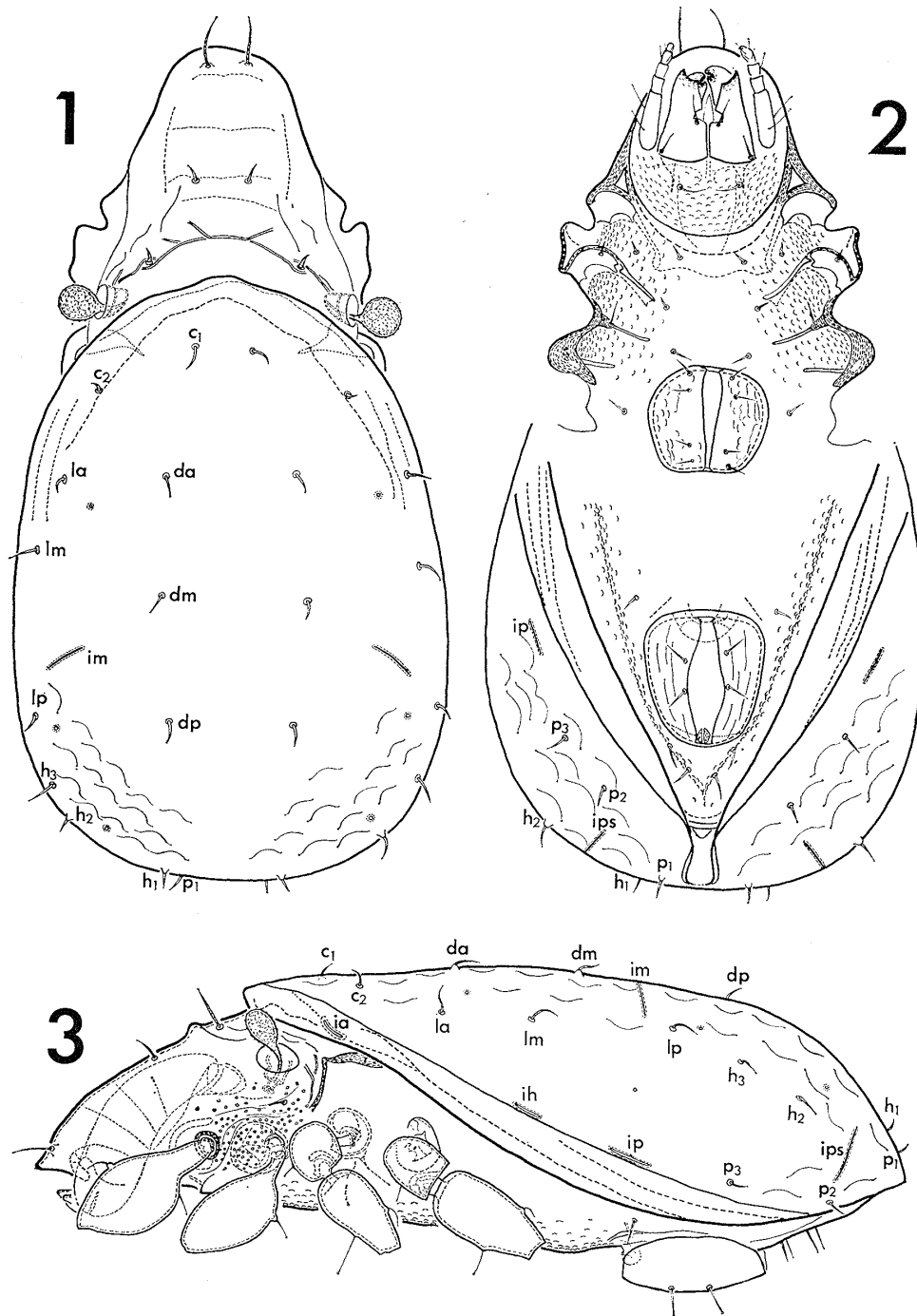
[Japanese name: Chibi-kozue Dani]

(Figs. 1–12)

Micreremus sp.: NOGUCHI and HARADA, 1979, p. 171.

Measurement. Body length: 260 (280) 300 μ ; width: 125 (145) 162 μ ; the ratio of length to width: 1.63 (1.94) 2.15.

Prodorsum. Surface covered with irregular granular secretion which is particularly dense on lateral sides of prodorsum (Figs. 5–6). Rostrum rounded without teeth or notches, the margin bending upward (Fig. 11). Rostral seta sparsely barbed, thin and subequal in length to interlamellar seta (Fig. 11). Lamellar seta short, thin, almost smooth, originating from an apophysis situated at about mid-distance along the length of prodorsum. Interlamellar seta barbed and thicker than rostral or lamellar seta (Fig. 9). The mutual distance: $in-in > la-la \geq ro-ro$. Exobothridial seta very short and fine. Several indistinct transverse lines running on prodorsum



Figs. 1–3. *Micreremus subglaber* sp. nov. — 1. Dorsal view. 2. Ventral view. 3. Lateral view.

between *la* and *ro*. A distinct transverse ridge issuing from *bo*, running across *in* and deriving several short ridges between *in*. Sensillus globular and scaled; the stalk short and also scaled. The inner wall of bothridium covered with minute granular secretion (Fig. 10).

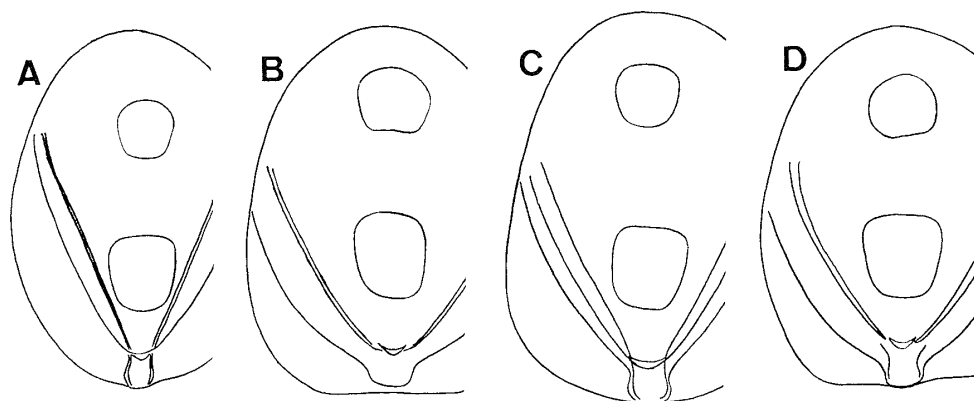


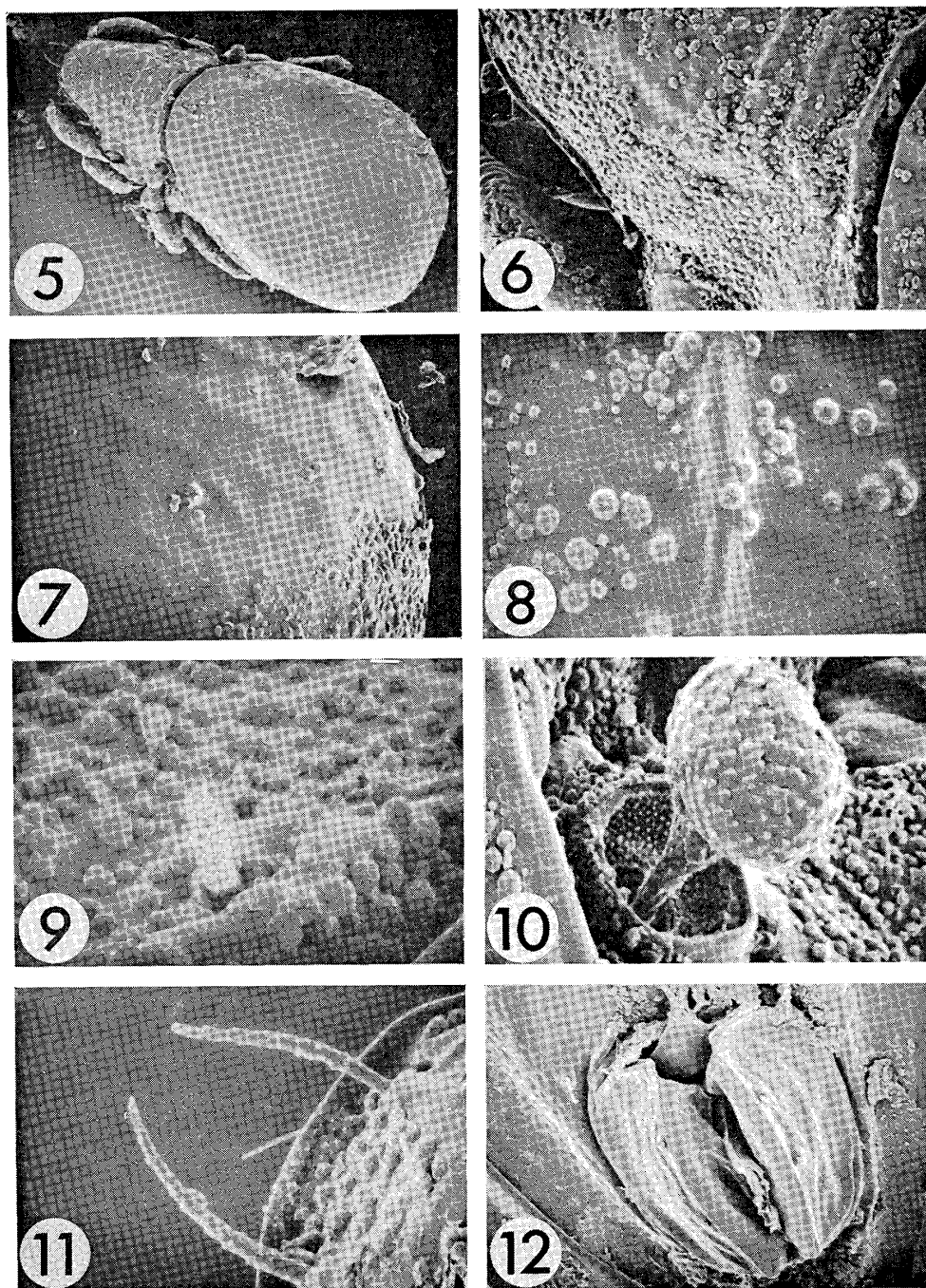
Fig. 4. *Micreremus subglaber* sp. nov.; morphological variation in the posterior part of ventral side.

Notogaster. Dorsosejugal suture protruding. Notogaster distending bilaterally to ventral side. Fourteen pairs of short, stiff, curved setae are present, each seta being inserted on an apophysis; two pairs (p_2, p_3) of them originating from ventral side. Three pairs of areae porosae and 5 pairs of lyrifissures (ia, ih, im, ip, ips) are present. The relative length of lyrifissures: $ips > im \geq ip > ih > ia$. In observation by SEM fissure im can be seen as an elevated ridge which seems to have no slit-like opening (Fig. 8). Notogastral surface has large, shallow depressions, the border of which loses sharpness (Figs. 5 & 7). By optical microscope (OM), the depressions are very difficult to see, so that they are only visible on the lateral and posterior inclined parts in dorsal aspect (Fig. 1).

Ventral side. Ventral plate V-shaped; the median part including anal opening elevated as a triangular plateau (Fig. 12). Condition of the conjunction between notogaster and ventral plate vary from individual to individual (Fig. 4). Among the figures shown in Fig. 4 A–D, the types A and B are most frequently observed. It is little doubt that the variation is not of sexual dimorphism, because there are some intermediate conditions (Fig. 4 C–D) between the two types and both the types can bear eggs. Ventral and epimeral plates covered with small indistinct foveolae. Genital plate sculptured with irregular longitudinal wrinkles or foveolae which are larger than those on ventral or epimeral plates. Anal plate sculptured only with irregular longitudinal wrinkles (Fig. 12). Ventral setae thin. Setal formula of epimerata: 3–1–2–1; epimeral setae $3b$ situated on *apo. sj*. Aggenital setae are absent. Four pairs of genital, 2 pairs of anal and 3 pairs of adanal setae are present. Ad_3 preanal and located laterally to iad which cannot be seen by SEM, though it can easily be seen by OM. Ad_1 and Ad_2 postanal and situated close together.

Legs. All legs tridactylous and homodactylous. Indistinct transverse wrinkles running partly on legs.

Type-series. Holotype (NSMT–Ac 9237): Shiga Heights in Nagano Prefecture, 1,750 m above sea-level, 16–VI–1980, on the tree crown of *Tsuga diversifolia* MASTERS;



Figs. 5–12. *Micreremus subglaber* sp. nov. (The photographs were taken by scanning electron microscope) — 5. Dorsal view ($\times 500$). 6. Prodorsum ($\times 2,000$). 7. Surface of notogaster ($\times 2,000$). 8. Lyrifissure *im* ($\times 5,000$). 9. Interlamellar seta ($\times 10,000$). 10. Sensillus ($\times 5,000$). 11. Rostrum and rostral setae ($\times 5,000$). 12. Anal plates ($\times 2,000$).

10 paratypes: the same data as holotype. The type-series will be deposited in the National Science Museum (Nat. Hist.), Tokyo.

Remarks. The new species is distinguishable from its known congeners by the surface structure of notogaster, which shows large, shallow, indistinct depressions. The known congeners show distinct sculpture of reticulate or polygonal pattern (*M. brevipes* (MICHAEL, 1888); *M. gracilior* (WILLMANN, 1932); *M. africanus* BALOGH, 1963; *M. macrofissura* HAMMER, 1979) or no sculpture with sparse tubercle (*M. (?) granulatus* BALOGH, 1970).

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